

IN THE CLAIMS

1. (Original) A device comprising:
 - a plurality of data transceivers for transferring input data and output data;
 - a plurality of write strobe transceivers for transferring timing information of the input data and for transferring a first group of auxiliary information;
 - a plurality of read strobe transceivers for transferring timing information of the output data and for transferring a second group of auxiliary information; and
 - an auxiliary circuit connected to the data transceivers and the write and read strobe transceivers for generating the first group of auxiliary information.
2. (Original) The device of claim 1, wherein the auxiliary circuit includes an inversion controller for conditionally inverting the input and output data.
3. (Original) The device of claim 2, wherein the auxiliary circuit further includes a parity controller for generating a parity code of the output data.
4. (Original) The device of claim 3, wherein the auxiliary circuit further includes a temperature reporter for generating temperature information of the device.
5. (Original) The device of claim 4, wherein the auxiliary circuit further includes a calibrator for calibrating a timing of a transfer of the output data.
6. (Original) The device of claim 1, wherein the write strobe transceivers include at least one write strobe receiver connected to the auxiliary circuit for transferring the second group of auxiliary information to the auxiliary circuit.
7. (Original) The device of claim 6, wherein the read strobe transceivers include at least one read strobe transmitter connected to the auxiliary circuit for transferring the first group of auxiliary information from the auxiliary circuit.

8. (Original) A device comprising:
 - a memory array for receiving inbound data and for outputting outbound data;
 - an input data path for transferring the inbound data to the memory array;
 - an output data path for transferring the outbound data from the memory array;
 - a plurality of data transceivers for transferring input data to the input path as the inbound data and for transferring the outbound data from the output path as output data;
 - a plurality of write strobe transceivers for transferring timing information of the input data and for transferring a first group of auxiliary information;
 - a plurality of read strobe transceivers for transferring timing information of the output data and for transferring a second group of auxiliary information; and
 - an auxiliary circuit connected to the data transceivers and the write and read strobe transceivers for generating the first group of auxiliary information.
9. (Original) The device of claim 8, wherein the auxiliary circuit includes an inversion controller for conditionally inverting the input and output data.
10. (Original) The device of claim 9, wherein the auxiliary circuit further includes a parity controller for generating a parity code of the output data.
11. (Original) The device of claim 10, wherein the auxiliary circuit further includes a temperature reporter for generating temperature information of the memory device.
12. (Original) The device of claim 11, wherein the auxiliary circuit further includes a calibrator for calibrating a timing of a transfer of the output data.
13. (Original) The device of claim 8, wherein the write strobe transceivers include at least one write strobe receiver connected to the auxiliary circuit for transferring the second group of auxiliary information to the auxiliary circuit.
14. (Original) The device of claim 13, wherein the read strobe transceivers include at least

one read strobe transmitter connected to the auxiliary circuit for transferring the first group of auxiliary information from the auxiliary circuit.

15. (Original) A system comprising:

a processor; and

a memory device connected to the processor, the memory device including:

a memory array for receiving inbound data and for outputting outbound data;

an input data path for transferring the inbound data to the memory array;

an output data path for transferring the outbound data from the memory array;

a plurality of data transceivers for transferring input data to the input path as the inbound data and for transferring the outbound data from output path as output data;

a plurality of write strobe transceivers for transferring timing information of the input data and for transferring a first group of auxiliary information;

a plurality of read strobe transceivers for transferring timing information of the output data and for transferring a second group of auxiliary information; and

an auxiliary circuit connected to the data transceivers and the write and read strobe transceivers for generating the first group of auxiliary information.

16. (Original) The system of claim 15, wherein the auxiliary circuit includes an inversion controller for conditionally inverting the input and output data.

17. (Original) The system of claim 16, wherein the auxiliary circuit further includes a parity controller for generating a parity code of the output data.

18. (Original) The system of claim 17, wherein the auxiliary circuit further includes a temperature reporter for generating temperature information of the memory device.

19. (Original) The system of claim 18, wherein the auxiliary circuit further includes a calibrator for calibrating a timing of a transfer of the output data.

20. (Original) The system of claim 15, wherein the write strobe transceivers include at least one write strobe receiver connected to the auxiliary circuit for transferring the second group of auxiliary information to the auxiliary circuit.

21. (Original) The system of claim 20, wherein the read strobe transceivers include at least one read strobe transmitter connected to the auxiliary circuit for transferring the first group of auxiliary information from the auxiliary circuit.

22.-115. (Canceled).